

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.

## REMARKS

In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. This amendment is believed to be fully responsive to all issues raised in the 1/28/03 Office Action.

5

### APPLICANT'S DISCLOSURE

Before addressing the substance of the Office's §102 and §103 rejections, the following description and explanation of Applicant's disclosure is provided in an attempt to illustrate ways in which the subject matter in Applicant's 10 disclosure differs from Webster's disclosure, Bergamin's disclosure, and Muldoon's disclosure.

Consider first the problem that Applicant's disclosure addresses. Specifically, Applicant's disclosure is directed to an assembly that has a signal carrying component 406 (Fig. 5), an insulating component 408, and a stiffener 15 410. Fig. 5 shows the stiffener 410 having a secured portion 412 and a non-secured or unsecured portion 414. The non-secured portion 414 is shown manipulated away from the rest of the assembly and *can be used to steer the assembly into the receptacle 404. Specification, pg. 7 lines 12-19.*

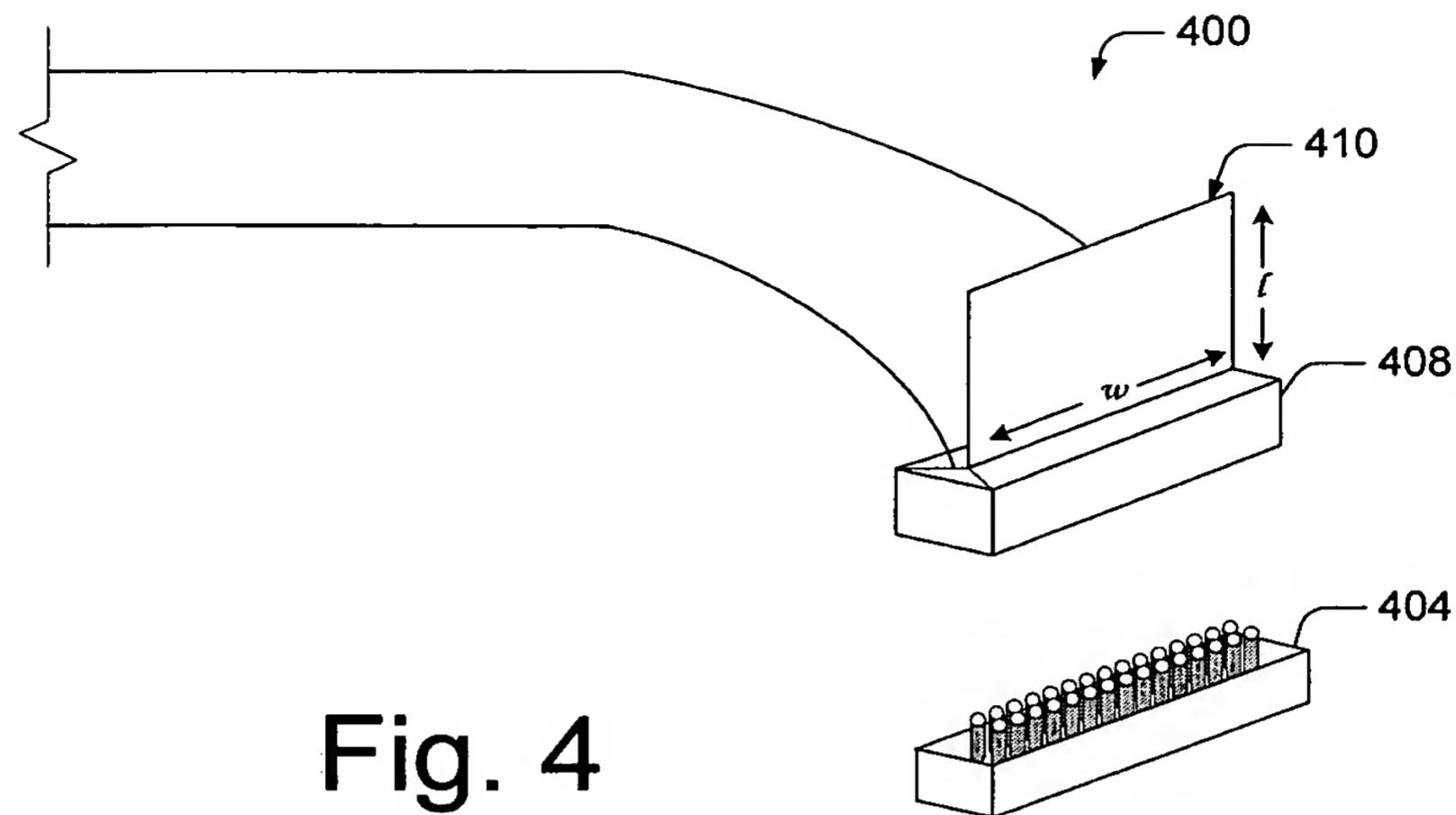


Fig. 4

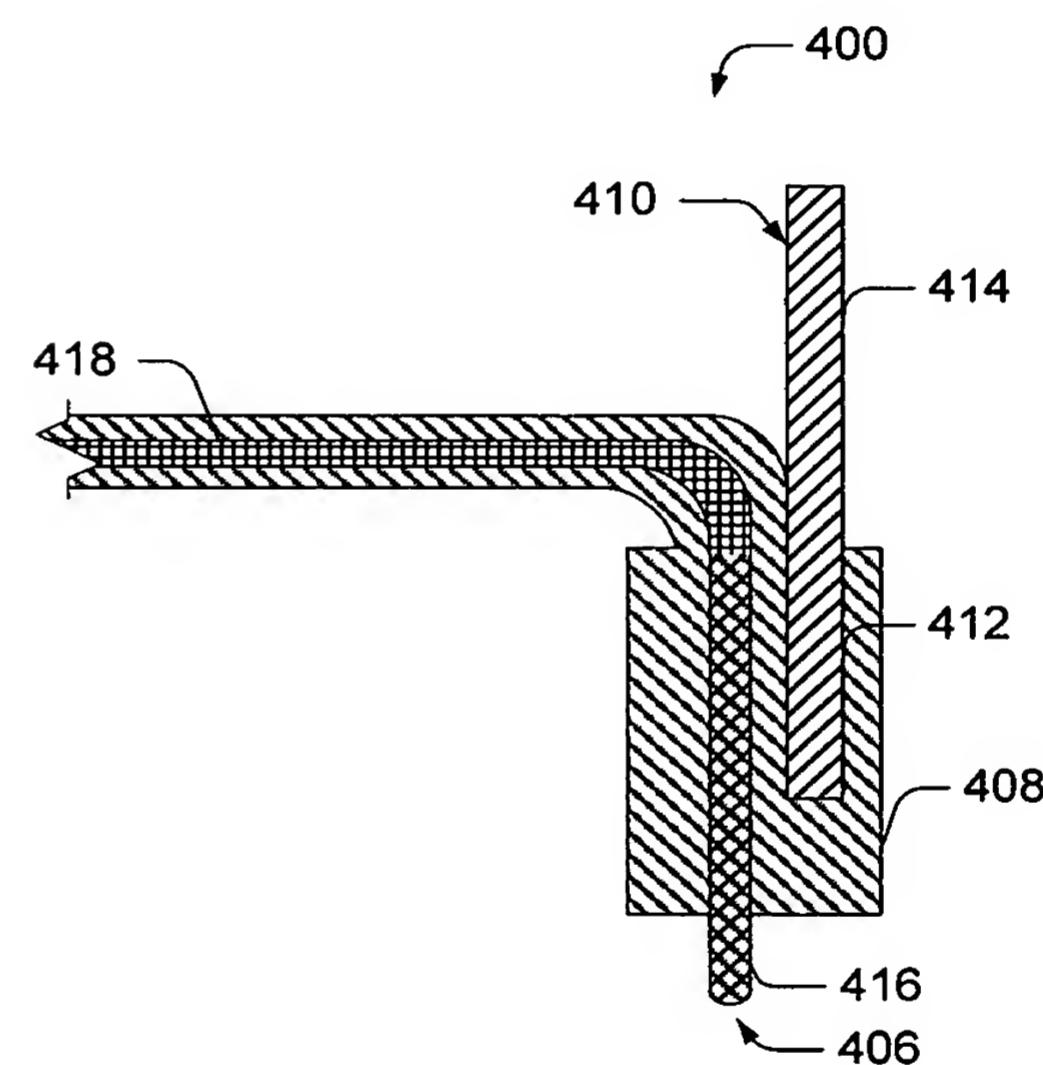
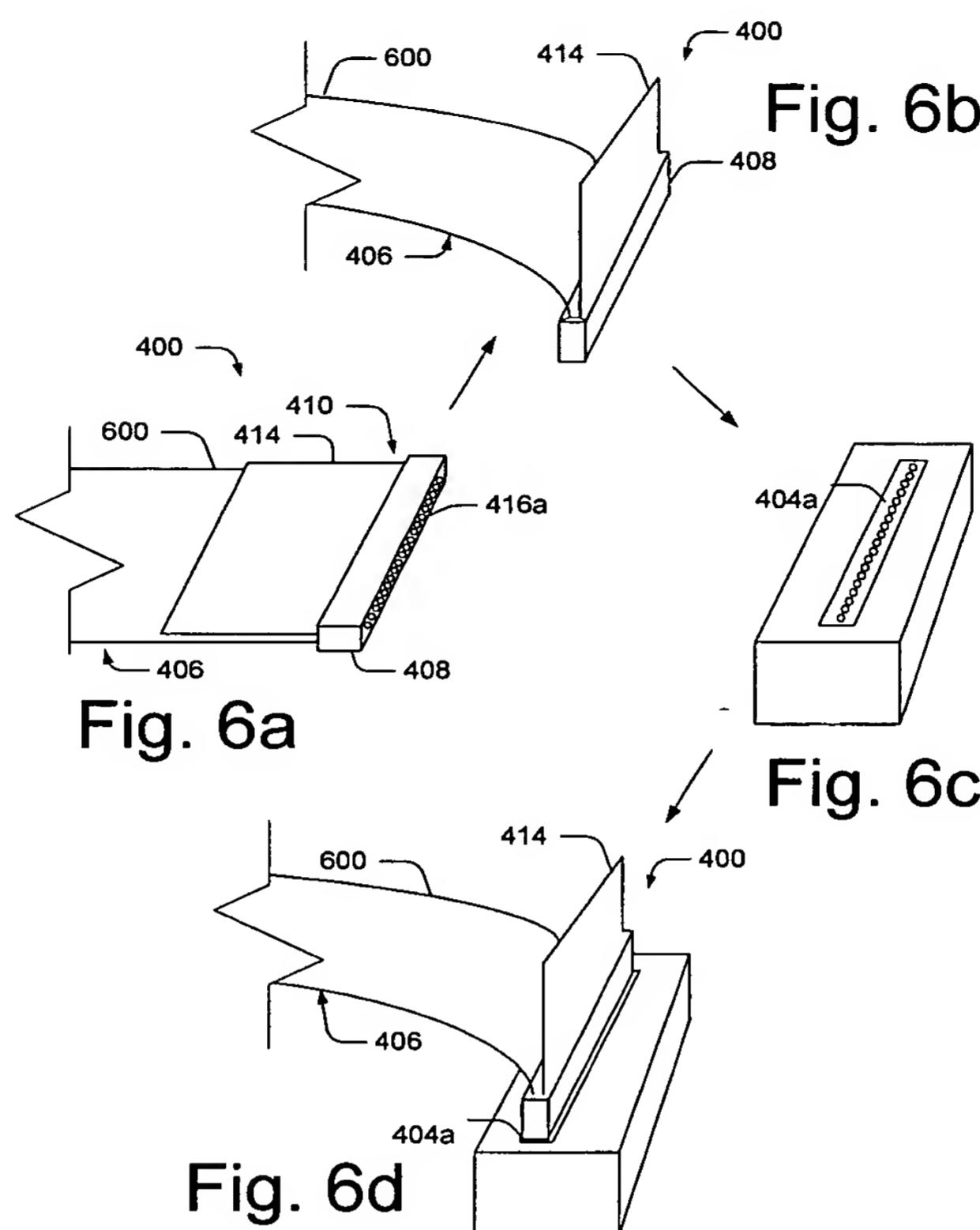


Fig. 5

Figs. 6a-6d illustrate how the assembly 400 *can be steered or manipulated into the receptacle 404a by use of the stiffener 410*. In this exemplary embodiment, the signal carrying component 406 comprises a flat flexible cable 600. Fig. 6a shows the stiffener's non-secured portion 414 in a

first disposition adjacent the flat flexible cable 600. The secured portion of the stiffener is molded into the insulative component 408 and thus cannot be seen in the Figs. Fig. 6b shows the stiffener's non-secured portion deployed away from the flat cable 600 into a second disposition. *Manipulation of the non-secured portion in this second disposition can allow the multiple interface components 416a to be positioned independently of the majority of the flat flexible cable (as in Fig. 6b) and into a receptacle 404a (Fig. 6d).*

*The stiffener can be less flexible than the flat flexible cable 600 and thus can aid in insertion into the receptacle 404a.* In embodiments such as Figs. 6a-6d where the signal carrying component comprises a flat flexible cable, *the stiffener can also provide stiffness that can keep multiple interface components 416a generally linear so that the overall shape better matches the shape of the receptacle and is more easily inserted.* Specification, page 8 line 23- pg. 9 line 12.



#### WEBSTER'S DISCLOSURE

Webster discloses that to facilitate *removing* electrical connectors from connection with external devices, *pull tabs* have been used. Such *pull tabs* generally *permit applying a withdrawing force* from a cable termination assembly without directly pulling on the cable itself. Col. 2 lines 47-52.

Webster discloses an electrical junction in a cable termination assembly. The cable termination assembly includes a contact and a conductor portion which is exposed between adjacent cable insulation portions. Col. 2 line 54 - Col. 3 line 14.

The invention also comprehends an improved *pull tab* and method of including the same in a cable termination assembly to facilitate *pulling* the assembly from connection with an external device without straining the electrical connections between conductors and contacts in the assembly. Col. 3 lines 15-5 20.

Webster specifically discloses a *pull tab* 50 of plastic or plastic-like sheet material, which is used for conventional purposes, as described above, has a plurality of openings 51 (FIGS. 2 and 5) through which respective deformed portions or loops, such as the loop 33", facing in one direction away from the plane of the cable 3 protrude to hold the *pull tab* in place relative to the cable 3. One end 52 of the *pull tab* 50 preferably overlaps at least part of the insulation portion 31B, and the other end 53 (FIG. 1) extends well beyond the cable termination 2 for manual access to facilitate manually *pulling* the latter from connection with an external device. Col. 8 lines 19-30.

15

#### REJECTIONS OF THE CLAIMS

#### THE CLAIM REJECTIONS BASED ON 35 U.S.C. §112

Claims 13, 19-20 are rejected under 35 U.S.C. §112 second paragraph as 20 allegedly being indefinite.

Claim 13 has been amended as suggested by the Office and is now in condition for allowance.

Claims 19-20 are cancelled.

THE CLAIM REJECTIONS BASED ON 35 U.S.C. §102

Claims 1-4, 7-10, 14, 15, 17-22 and 24 stand rejected under §102 as being  
5 anticipated by U.S. Patent No. 4,310,208 to Webster et al ("Webster").

**Claim 1** is directed to a coupling assembly, and recites in pertinent part:

- at least one signal carrying component capable of being coupled with a corresponding receptacle; and,
- at least one **steerable component**, at least a portion of which is secured with the signal carrying component, wherein a non-secured portion of the steerable component can be manipulated by a user from a first disposition generally adjacent a portion of the signal carrying component to a second non-adjacent disposition *for steering the assembly into the receptacle.*

15 Webster discloses a pull tab and method of including the same in a cable termination assembly to facilitate pulling the assembly from connection with an external device without straining the electrical connections between conductors and contacts in the assembly. Webster does not disclose or suggest any type of steerable component as recited in claim 1. More specifically, Webster does not  
20 disclose "a non-secured portion of the steerable component can be manipulated by a user...*for steering the assembly into the receptacle.*" Such manipulation

requires sufficient rigidity to allow a user to push on the non-secured portion to steer the assembly into the receptacle.

*not claimed*

Webster neither discloses such rigidity, nor the concept of a steerable component that can be utilized for insertion. Conversely, Webster specifically 5 states that the pull tab is for "applying a withdrawing force" and does not discuss any other use for which the pull tab can be configured. Accordingly, Applicant traverses the rejection and respectfully requests that the rejection of be withdrawn.

**Claims 2-4 and 7-10** depend either directly or indirectly from claim 1 and 10 as such contain all the limitations of claim 1. These claims are allowable as depending from an allowable claim and for their own recited features, which in combination with claim 1, are neither shown nor described by Webster.

**Claim 14** is directed to a coupling assembly and recites in pertinent part:

- a signal carrying component comprising at least one conductor and 15 an interface component, wherein the at least one conductor is capable of carrying a signal for provision to an electronic device and is coupled with the interface component, the interface component being configured for receipt in an electronic device receptacle; and,
- a steerable component having a secured portion on the signal carrying component and a non-secured portion, the non-secured portion having a first disposition adjacent the signal carrying

component and a second disposition spaced away from the signal carrying component, the non-secured portion being configured for user deployment away from the signal carrying component in a manner that permits the interface component to be positioned independently of a position of at least a majority of the at least one conductor, wherein the steerable component is configured with sufficient rigidity to allow a user to push the interface component into the electronic device receptacle by manipulating the non-secured portion.

10 Additional clarifying language has been added to claim 14 which overcomes the Office's rejection. Amended claim 14 recites that the steerable component is configured with sufficient rigidity to allow a user to push the interface component into the electronic device receptacle by manipulating the non-secured portion. Webster does not disclose or suggest any type of *steerable component* which can be pushed to insert the interface component. Conversely, Webster specifically states that the pull tab is for "applying a withdrawing force". Further, Webster does not contain any mention that a pull tab can be configured for any use besides withdrawing. As such Webster cannot anticipate the elements of amended claim 14. Accordingly, Applicant traverses the rejection and respectfully requests that the rejection of be withdrawn.

**Claims 15, 21-22 and 24** depend from claim 14 and as such contain all the limitations of claim 14. These claims are allowable as depending from an

allowable claim and for their own recited features, which in combination with claim 14, are neither shown nor described by Webster.

#### THE CLAIM REJECTIONS BASED ON 35 U.S.C. §103

5       Claims 5 and 16 stand rejected under §103 as being unpatentable over U.S. Patent No. 4,310,208 to Webster et al ("Webster") in view of U.S. Patent No. 4,480,886 to Bergamin ("Bergamin").

Claim 5 depends indirectly from claim 1 and as such contains all the limitations of claim 1. This claim is allowable as depending from an allowable 10 claim and for its own recited features, which in combination with claim 1, are neither shown nor described by Webster either singly or in combination with the references cited by the Office.

In addition, Bergamin teaches a quick connect connector for use with multi-conductor circuits, such as flexible printed circuits or multi-core cables and 15 is of the type known in the art as zero insertion force, in that it requires no force to insert the multi-conductor circuit into the connector. *Bergamin* Col. 2 line 65 - Col. 3 line 3. Like Webster, Bergamin is totally silent as to a steerable component as recited in claim 1. The addition of Webster adds nothing to the recited elements missing from Webster. As such, neither Webster, Bergamin, 20 nor the combination thereof teaches or suggests the elements of claim 1 from which claim 5 depends. Accordingly, for this additional reason claim 5 is allowable.

**Claim 16** depends indirectly from claim 14 and as such contains all the limitations of claim 14. This claim is allowable as depending from an allowable claim and for its own recited features, which in combination with claim 14, are neither shown nor described by Webster either singly or in combination with the references cited by the Office.

Like Webster, Bergamin is totally silent as to a steerable component as recited in claim 14. As such, neither Webster, Bergamin, nor the combination thereof teaches or suggests the elements of claim 14 from which claim 16 depends. Accordingly, for this additional reason claim 16 is allowable.

10       **Claims 6, 11 and 23** are rejected under §103 as being unpatentable over Webster. These claims depend from allowable base claims and as such are allowable.

15       **Claims 12 and 13** stand rejected under §103 as being unpatentable over U.S. Patent No. 4,310,208 to Webster et al ("Webster") in view of U.S. Patent No. 2,030,115 to Muldoon ("Muldoon").

Claims 12-13 depend directly or indirectly from allowable claim 1 and as such are allowable. Claim 1 requires a steerable component having a non-secured portion for steering the assembly into the receptacle.

20       Webster discloses a pull tab and method of including the same in a cable termination assembly to facilitate pulling the assembly from connection with an external device without straining the electrical connections between conductors and contacts in the assembly. Webster does not teach, suggest, or contemplate

configuring the pull tab for other purposes. The Office then looks to Muldoon to supply the missing elements. However, like Webster, Muldoon teaches a structure for pulling a plug without pulling on the electrical component.

Muldoon teaches an electric plug which can be withdrawn from a socket without pulling upon the electric wire that is connected to the terminals carried by the plug. Muldoon accomplishes this with an enlarged ring through which a user can insert a finger for pulling out the plug without exerting any tension upon the electric wire. Muldoon, like Webster is silent as to any steerability of the ring for steering the assembly into a receptacle.

10 Applicants traverse the rejection of claims 12-13 on the basis that the Office Action fails to establish a prima facie case of obviousness of claims 12-13 because there is no motivation to modify Webster with the teachings of Muldoon.

15 Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. (See, MPEP 2143.01 "The prior art must suggest the desirability of the claimed invention"). In this regard, the Office Action states 20 that it would have been obvious "to form the steerable component of Webster to be more rigid, as taught by Muldoon, to provide a stronger and longer-lasting steerable component." Applicants submit that Webster does not recognize a need

for rigidity because the Webster apparatus is used for pulling only, not pushing. *↗*

Muldoon does not teach that having a steerable component that is more rigid than a signal carrying component leads to a longer lasting component.

Applicants submit that Muldoon is silent regarding rigidity. Further, merely

5 changing the rigidity of a member does not necessarily make a "stronger and longer-lasting component." Indeed, in some instances, increasing the rigidity of a member may make the member less strong. Accordingly, because there is no motivation to combine Webster with the teachings of Muldoon, Applicants submit that the Office Action fails to establish a prima facie case of obviousness

10 of claims 12 and 13. Withdrawal of this rejection is requested.

In addition, the Office Action also fails to establish a prima facie case of obviousness of claim 12 because Webster and Muldoon do not disclose all claim limitations. (See, MPEP 2143.03, "To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art."). Applicants submit that, even when combined, Webster and Muldoon fail to disclose "the rigidity of the steerable component is greater than the rigidity of the signal carrying component" as recited in claim 12.

The Office Action concedes that Webster does not disclose "specific rigidities of the components." In this regard, however, the Office Action alleges that "Muldoon teaches a coupling assembly in which the steerable component has a rigidity greater than the signal carrying component." Applicants traverse this assertion and submit that Muldoon does not disclose any relative rigidity

between different components. Indeed, Muldoon does not address the rigidity of the ring 5 relative to the rigidity of the wires 3. Accordingly, because neither Webster nor Muldoon discloses "the rigidity of the steerable component is greater than the rigidity of the signal carrying component" Applicants submit that 5 claim 12 is non-obvious over Webster in view of Muldoon. Withdrawal of this rejection is requested for this additional reason.

In addition, the Office Action also fails to establish a prima facie case of obviousness of claim 13 because Webster and Muldoon do not disclose all claim limitations. (See, MPEP 2143.03, "To establish prima facie obviousness of a 10 claimed invention, all the claim limitations must be taught or suggested by the prior art."). Applicants submit that, even when combined, Webster and Muldoon fail to disclose "the rigidity of the length of the steerable component exceeds the rigidity of the second length of the signal carrying component" as recited in claim 13.

15 The Office Action concedes that Webster does not disclose "specific rigidities of the components." In this regard, however, the Office Action alleges that "Muldoon teaches a coupling assembly in which the steerable component has a rigidity greater than the signal carrying component." Applicants traverse this assertion and submit that Muldoon does not disclose any relative rigidity 20 between different components. Indeed, Muldoon does not address the rigidity of the ring 5 relative to the rigidity of the wires 3. Accordingly, because neither

Webster nor Muldoon discloses "the rigidity of the length of the steerable component exceeds the rigidity of the second length of the signal carrying component" Applicants submit that claim 13 is non-obvious over Webster in view of Muldoon. Withdrawal of this rejection is requested for this additional 5 reason.

Conclusion

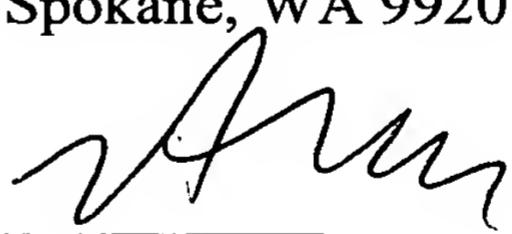
Claims 1-16, 21-24, and 37-38 are believed to be in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance 10 of the present application. Should any issue remain that prevents immediate issuance of the application, the Examiner is encouraged to contact the undersigned attorney to discuss the unresolved issue.

15

Respectfully Submitted,  
Paul Mitchell  
Lee & Hayes, PLLC  
421 W. Riverside Avenue, Suite 500  
Spokane, WA 99201

20

Dated: 4/25/03

  
Paul Mitchell  
Reg. No. 44,453  
Phone No. (509)324-9256x237